Dr. Nabeel M. Gazzaz

NabeelMGazzaz@Yahoo.com

(00 962) 77 2476185 ✆ (00 962) 78 0790891

OBJECTIVE

Long–term goal is to secure a job in academia and research and dedicate myself to research in the field of environmental analysis and modeling. Primary areas of interest include environmentrics/chemometrics; artificial neural network[1] modeling of natural and engineered systems; pattern recognition and trend analysis; environmental chemistry and pollution; and remediation of polluted and contaminated sites.

PERSONAL DETAILS

Date of Birth: 09/ 19/ 1970 **Place of Birth**: Amman – Jordan **Nationality**: Jordanian

PERSONAL PROFILE

Enthusiastic, research-focused, and professional environmental analyst and modeler. Enjoys being part of, as well as leading, a successful and productive research team. Quick to grasp new ideas and concepts and to develop innovative and creative solutions to research problems. Creative, analytical individual, with an impressive research and teaching potential. Able to work well on my own initiative and can demonstrate the high levels of motivation required to meet tight deadlines.

EDUCATION

Ph.D. **UNIVERSITI PUTRA MALAYSIA** February, 2012 Kuala Lumpur, MALAYSIA

Doctor of Philosophy in Environmental Analysis and Modeling (**CGPA**: 3.82/4.00; **Rating**: Excellent)

- Thesis Title: Artificial Neural Network for Water Quality Assessment and Land Use Pattern Recognition in Kinta River Catchment.
- Curriculum of the Ph.D. program included the courses (i) environmental pollution and treatment technology; (ii) water quality, salinity control, and reclamation; (iii) analytical techniques in environmental sciences; (iv) water pollution control technology; and (v) research design and methodology for environmental sciences, amongst others.

M.Sc. **UNIVERSITY OF JORDAN** August, 1999 Amman, JORDAN

Master of Science in Environmental Sciences and Management (**CGPA**: 3.58/4.00; **Rating**: Very Good)

- Thesis Title: Investigation of the long-term effects of treated domestic wastewater irrigation on soil chemistry and olive (*Olea Europea*, L.) yield and quality.
- Curriculum of the M.Sc. program included the courses (i) chemical environmental pollutants; (ii) advanced environmental soil chemistry; (iii) advanced biostatistics; and (iv) analytical methods of soil, water, and plant analysis, besides a number of courses related to environmental planning and natural resource management.

B.Sc. **YARMOUK UNIVERSITY** January, 1993 Irbed, JORDAN

Bachelor of Science in Chemistry (Major) and Environmental Sciences (Minor) (**CA**: 72.3%; **Rating**: Good)

- Curriculum of the B.Sc. program comprised a multitude of courses including (i) analytical chemistry; (ii) instrumental analysis; (iii) physical chemistry; (iv) water science; (v) soil science; (vi) environmental pollution; and (vii) environmental hazards, besides a number of courses in natural resource management.

EXPERIENCE

2000-2006 **THE HASHEMITE UNIVERSITY** Zarqa, JORDAN

Faculty of Natural Resources and the Environment/Department of Management of Land and the Environment

- **Job Title**: Teaching and research assistant (on a full-time basis).
- **Job Responsibilities** as Teaching Assistant: Instructing the practical, undergraduate courses of Principles of Soil Science; Water Chemistry (Hydrochemistry); and Soil Chemistry.
- **Job Responsibilities** as Research Assistant: Participation in projects investigating environmental pollution cases, e.g., investigating pipe corrosion problem in a steel factory, and investigating the effects of sewage sludge application to soil on soil chemistry and plant yield and quality. In addition, the research assistant role entailed involvement in periodic drinking water and industrial wastewater quality monitoring consultancy works.

[1] The Multi-Layer Perceptron (MLP); Radial Basis Function (RBF) Neural Networks; Probabilistic Neural Networks (PNN); Generalized Regression Neural Networks (GRNN); and the Self-Organizing Feature Maps (also known as Kohonen Self-Organizing Maps).

1996-1997 **THE UNIVERSITY OF JORDAN** Amman, JORDAN

Faculty of Physical Science/Department of Chemistry

- **Job Title**: Teaching assistant.
- **Job Responsibilities**: Theoretic, as well as practical, demonstration and illustration of practical chemistry courses for undergraduate students, besides follow up and evaluation of student conduct and results.

1993-1996 **AL ISRAA' UNIVERSITY** Amman, JORDAN

Faculty of Allied Medical Sciences/Department of Pharmacy

- **Job Title**: Laboratory technician (on a full-time basis).
- **Job Responsibilities**: Preparation of chemical reagents, solutions, and standards; set-up of laboratory instruments; and experiment demonstration and procedure illustration for undergraduate students joining the Instrumental Analysis, Physical Pharmacy, Medicinal Chemistry, and Phytochemistry Laboratories.

PROFESSIONAL ACTIVITIES

- **Professional Training Courses**:
  1. Physical and Chemical Analysis of Water and Wastewater.
  2. Quality Control Charts in the Chemical Analysis Laboratories.
  3. Higher Education Teaching and Evaluation Technology.
- **Workshops Attended**:
  1. Use of Membrane Reverse Osmosis Technology in Treatment of Water and Wastewater.
  2. Gray water: Current Status and Future Perspective.
  3. Quality of Drinking Water in Jordan: Scientific Facts.
  4. The National Project for Monitoring Water Quality in Jordan.
  5. Urban Wastewater Treatment and Reuse Technologies (Organized by the MEDAWARE Project).
  6. The Efficient Use of the Services and Databases of the Aggregated, Online Electronic Publications (EBSCOhost, Emerald, ProQuest, RefWorks, ScienceDirect, SciFinder, Scopus, and Wiley Interscience).

SKILLS

- **English Language Skills:**

  TOEFL: (Test Date: 17 July 2003)

  Total Test Score: **270** Computer-Based Test (CBT), which is equivalent to 637out of 667 according to the Paper–Based Test (PBT). Details of this 'total' score are as follows:

  Listening: 27 – **Structure/Writing**: 27 – **Reading**: 27 – **Essay Rating**: 5.0 out of 6.0
- **IT Skills**: International Computer Driving License (ICDL); Adobe Photoshop; Programming using Visual Basic; PC maintenance and trouble shooting; and data manipulation and statistical analysis using the SPSS package.
- **Other Skills**: I possess good knowledge and experience dealing with:

1. Artificial neural network software:	SPSS	NeuralPower
	NuMap	Attrasoft Predictor
	NuClass	NeuroIntelligence
	Auto2Fit	StatSoft STATISTICA
	Neuralyst	StatGraphics Centurion
	Forecaster	NeuralWorks Professonal II/Plus
	MATLAB	
2. Machine learning software[2]:	SVMLight	StatSoft STATISTICA
3. Data manipulation and statistical analysis software:	JMP	MATLAB
	SAS	Systat SigmaPlot
	Minitab	StatSoft STATISTICA
	MedCalc	StatGraphics Centurion

4. Computerized chemical models for equilibrium calculations in natural systems:

Soil: SOILCHEM

Water[3]: MINEQ, PHREEQC, MINTEQA2, PCWATEQ, MINEQL+

5. Geographic Information System (GIS) and related software like Global Mapper and MapInfo.

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[2] Support Vector Machines (SVM); Naïve Bayes Classifiers, and the *k-Nearest Neighbor* Classifier.

[3] Ocean, river, lake, ground, rainfall, and low-temperature hydrothermal waters

PROFESSIONAL MEMBERSHIPS

The Jordan Environment Society (JES)
The Soil System Sciences (SSS) Division/The European Geosciences Union (EGU)

HOBBIES

Reading.

PUBLICATIONS

1: Gazzaz, N.M., Kamil, M., Firuz, M., Zaharin, A., and Juahir, H. 2012. Characterization of spatial patterns in river water quality using chemometric pattern recognition techniques. Marine Pollution Bulletin 64 (4): 688-698. (Impact Factor (IF): 2.359).

[This article has been identified by Earth Emphasis (Center for Top Earth and Environmental Science Research) as being of special interest to the progress in the Earth Sciences field. Earth Emphasis alerts the scientific community to breaking journal articles considered to represent the best in Earth Science and Environmental Studies research.]

2: Gazzaz, N.M., Kamil, M., Zaharin, A., Juahir, H., and Firuz, M. 2012. Artificial neural network modeling of the water quality index for Kinta River (Malaysia) using water quality variables as predictors. Marine Pollution Bulletin 64 (11): 2409-2420. (IF: 2.359)

3: Gazzaz, N.M., Kamil, M., Hafizan, J., Firuz, M., and Zaharin, A. 2013. Water Quality Assessment and Analysis of Spatial Patterns and Temporal Trends. Water Environment Research 85 (8): 751-767. (IF: 0.890)

4: Gazzaz, N.M., Kamil, M., Juahir, H., Firuz, M., and Zaharin, A. 2014. Artificial Neural Network Modeling of the Water Quality Index Using Land Use Areas as Predictors. Water Environment Research WER WER-D-13-00140R1. (IF: 1.134))

REFERENCES

1. Prof. Dato' Nikmat Muhamad bin Nik Abd. Majid

Faculty of Forestry; Universiti Putra Malaysia (UPM)

E-mail: nik@forr.upm.edu.my **Office Phone**: (+60) 3 8946 7211 **Mobile Phone**: (+60) 12 2365996

1. Associate Prof. Mohd Kamil Yusoff

Director of Center for Professional Environmental Services; Faculty of Environmental Studies; UPM

E-mail: mkamil@env.upm.edu.my **Office Phone**: (+60) 3 8946 6122/4 **Mobile Phone**: (+60) 12 2326102

2. Associate Prof. Mohammad Firuz Ramli

Director of the Environmental Sciences Graduate Program; Faculty of Environmental Studies; UPM

E-mail: firuz@env.upm.edu.my **Office Phone**: (+60) 3 8946 6753/6745 **Mobile Phone**: (+60) 16 2220607

3. Prof. Taleb M. Abu-Sharar

Department of Land, Water, and Environment; Faculty of Agriculture; The University of Jordan.

E-mail: t.m.abu-sharar@ju.edu.jo **Office Phone**: (+962) 6 5355000 (Ext. 22454) **Mobile Phone**: (+962) 79 5740855

4. Prof. Deifallah Dawood Badarneh

Department of Land, Water, and Environment; Faculty of Agriculture; The University of Jordan.

E-mail: badarneh@ju.edu.jo **Office Phone**: (+962) 6 5355000 (Ext. 22443) **Mobile Phone**: (+962) 77 7160822

6. Prof. Ali. R. El-Naqa

Water and Environment Management; Faculty of Natural Resources and the Environment; The Hashemite University

E-mail: elnaqa@hu.edu.jo **Office Phone**: (+962) 5 3903333 (Ext. 4231) **Mobile Phone**: (+962) 79 9047033

7. Associate Prof. Mohammad I. Qinna

Land and Environment Management; Faculty of Natural Resources and the Environment; The Hashemite University

E-mail: qinna@hu.edu.jo **Office Phone:** (+962) 5 3903333 (Ext. 5122) **Mobile Phone:** (+962) 79 6700222

8. Assistant Prof. Akef M. Al Fugaraa'

Department of Surveying Engineering; Faculty of Engineering; Al Al-Bayt University

E-mail: akifmohd@aabu.edu.jo **Office Phone:** (+962) 2 6297000 **Mobile Phone:** (+962) 77 2413968

9. Assistant Prof. Mohammad S. Al Basheer

Department of Computer Science; Prince Hussein Faculty of Information Technology; Al Al-Bayt University

E-mail: mohdelb@aabu.edu.jo **Office Phone**: (+962) 2 6297000 **Mobile Phone**: (+962) 79 7827686